CHEL'TSOVA,M.A.; CHERNYSHEV,Ye.A.; PETROV,A.D.

Behavior of alkenyl halides with multiple linkage in γ-, δ-, and ε-positions in condensation reactions with alkyl halides in presence of magnesium. Izv.AN SSSR. Otd.khim.nauk no.3: 522-527 My-Je '55. (MLRA 8:9)

1. Institut organicheskoy khimii im. N.D.Zelinskogo Akademii nauk SSSR.

(Halides) (Condensation products (Chemistry))

Organomagnesium synthesis and ... [illegible]

[illegible]

while at 140° there was obtained [illegible] b. 202 [illegible], n_D^{20} 1.5105, d_{20} [illegible] tion also gave $(C_6H_{11})_2CH$, b. [illegible] 0.9227 and $(C_6H_5)_2CH \cdot CH_2$ [illegible] [illegible] similarly [illegible] .577 [illegible] [illegible] d_{20} 0.9403. With [illegible] the side chain of partially or completely [illegible] bers of this group of hydrocarbons there [illegible] ency to form glasses on freezing. Visco[illegible] ucts are tabulated in 0-150° range, these usually high viscosities for the compds. [illegible] considerably above the actual [illegible] the [illegible] of the group show very small changes of viscosity with temp.

G. M. Kosolapoff

AUTHORS: Chel'tsova, M. A., Petrov, A. D., Yegorov, Yu. P. 79-28-4-22/60

TITLE: The Organomagnesium Synthesis and Properties of 1,1,1-Triphenylalkylmethanes, 1,5-Diphenyl-3-Benzil-Pentane, 1-Phenyl-3 (2 Phenylethyl)-Tridecane. II (Magniyorganicheskiy sintez i svoystva 1,1,1-trifenilalkilmetanov, 1,5-difenil-3-benzilpentana, 1-fenil-3(2-feniletil)-tridekana. II)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 4, pp. 945-950 (USSR)

ABSTRACT: In the present paper the authors synthezised for the first time 14 hydrocarbons: 1,1,1-triphenyloctane, 1,1,1-triphenyl-2-methyl othane, 1,1,1-triphenyldecane, 1,1,1-triphenylundecane, 1,5-diphenyl-3-benzilpentane, 1-phenyl-3-(2-phenylethyl)-tridecane, 1,1,1-tricyclohexipentane, 1,1,1-tricyclohexyl-2-methyloctane, 1,1,1-tricyclohexyldecane, 1,1,1-tricyclohexylundecane,

Card 1/3

The Organomagnesium Synthesis and Properties of 1,1,1-Triphenylalkylmethanes, 1,5-Diphenyl-3-Benzil-Pentane, 1-Phenyl-3 (2 Phenylethyl)-Tridecane.II

79-28-4-22/60

1,1-dicyclohexyl-2-methyloctane, 1,1-dicyclohexyldecane, 1,5-dicyclohexyl-3-(cyclohexylmethyl)-Pentane, 1-cyclohexyl-3-(cyclohexylethyl)-tridecane. The solidification points and the viscous properties of these substances were determined. It was shown, that in the triphenyl alkylmethane series the viscosity and the solidification point decrease corresponding to a lengthening of the alkyl chain up to C_7H_{15}, and then increase again. An analogous minimum obviously also occurs in the tricyclohexyl-alkylmethane series. Attempts to localize this minimum were, however, unsuccessful, because tricyclohexylnonyl- and decylmethane vitrify. It was found that the transition from 1,1,1-tricyclohexylpentane to 1,5-dicyclohexyl-3-(cyclohexylmethyl)-pentane, and from 1,1-diphenyltetradecane to 1-phenyl-3-(2-phenylethyl)-tridecane results in a considerable lowering of the solidification point. This is a result of the dispersal of the cyclohexyl (phenyl) nuclei in the molecules

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The Organomagnesium Synthesis and Properties of 1,1,1-Triphenylalkylmethanes, 1,5-Diphenyl-3-Benzil-Pentane, 1-Phenyl-3 (2 Phenylethyl)-Tridecane. II 79-28-4-22/60

of hydrocarbons.
There are 2 figures, 3 tables and 9 references, 2 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii akademii nauk SSSR (Institute for Organic Chemistry, AS USSR)

SUBMITTED: March 18, 1957

Card 3/3

CHEL'TSOVA M. A.

5

СВОЙСТВА ИНДИВИДУАЛЬНЫХ ПОЛИЦИКЛИЧЕСКИХ УГЛЕВОДОРОДОВ РАЗЛИЧНЫХ ТИПОВ СТРУКТУРЫ И СОСТАВА $C_{[illegible]}$—$C_{[illegible]}$

А. Д. Петров, Е. П. Каплан, О. М. Нефедов, М. А. Чельцова

(Институт органической химии им. Н. Д. Зелинского АН СССР, Москва)

VIII Mendeleyev Congress for General and Applied Chemistry in Section of Chemistry and Chemical Technology of Fuels, publ. by Acad. Sci. USSR, Moscow 1959

abstracts of reports scheduled to be presented at above mentioned congress, Moscow, 15 March 1959.

5 (3)

AUTHORS: Chel'tsova, M. A., Petrov, A. D. SOV/79-29-3-15/61

TITLE: Synthesis and Hydrogenation of 1,4,7-Triphenyl Heptane; 1,7-Diphenyl-4-benzyl Heptane, and 1,7-Diphenyl-4-(2-phenylethyl)-heptane. III (Sintez i gidrogenizatsiya 1,4,7-trifenilgeptana; 1,7-difenil-4-benzilgeptana i 1,7-difenil-4-(2-feniletil)-geptana. III)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 3, pp 820-823 (USSR)

ABSTRACT: The authors continued the synthesis of the triphenyl- and tricyclohexyl alkanes (Refs 1,2). The hydrocarbons were synthesized according to the following general scheme:

$$C_6H_5\text{-C-C-CMgBr} + C_2H_5OOC(C)_n\text{-}C_6H_5 \longrightarrow$$

$$\longrightarrow (C_6H_5\text{-C-C-C})_2\text{-C}(\text{OH})\text{-(C)}_n\text{-}C_6H_5 \xrightarrow{-H_2O} \text{olefin mixture}$$

$$\xrightarrow{+H_2} C_6H_5\text{-C-C-C-C-C-C-C-}C_6H_5 \xrightarrow{+9H_2} C_6H_{11}\text{-C-C-C-C-C-C-C-}C_6H_4$$

$$\text{(C)}_n \qquad\qquad \text{(C)}_n$$

$$C_6H_5 \qquad\qquad C_6H_{11}$$

Card 1/3

Synthesis and Hydrogenation of 1,4,7-Triphenyl Heptane; 1,7-Diphenyl-4-benzyl Heptane, and 1,7-Diphenyl-4-(2-phenylethyl)-heptane. III

The physico-chemical properties of the hydrocarbons obtained are given in table 1. The melting points and the viscosities of the hydrocarbons synthesized in the present paper as well as in the previous one, which are only characterized by the different position of the phenyl- or cyclohexyl rings, are presented in table 2. A comparison of these melting points (or solidification points) and viscosities indicates that the transition from the triphenyl- and tricyclohexyl alkanes where all rings are placed at one carbon atom to the triphenyl- and tricyclohexyl alkanes of equal molecular weight which, however, exhibit a different position in the chain causes a considerable drop of the solidification points and of viscosity. It was of interest to compare also the solidification points and viscosities of the triphenyl- and tricyclohexyl alkanes synthesized. It can be seen that the solidification points fall from -15° to -38° with the increasing length of the side chain in the center, irrespective of the increasing molecular weight. Earlier, this interesting phenomenon was observed only in aliphatic hydrocarbons. There are 2 tables and 6 references, 2 of which are Soviet.

SOV/79-29-3-15/61

Synthesis and Hydrogenation of 1,4,7-Triphenyl Heptane; 1,7-Diphenyl-4-benzyl Heptane, and 1,7-Diphenyl-4-(2-phenylethyl)-heptane. III

ASSOCIATION: Institut organicheskoy khimii Akademii nauk SSSR (Institute of Organic Chemistry of the Academy of Sciences, USSR)

SUBMITTED: January 20, 1958

Card 3/3

5.3300B

S/079/60/030/06/02/009
B002/B016

AUTHORS: Petrov, A. D., Kologa, B. D., Malanicheva, V. G., Zakharov, Ye. P., Nefedov, O. M., Tereshchenko, Ye. R., Chel'tsova, M. A.

TITLE: Properties of Naphthene Hydrocarbons of Different Structural Types of the Composition C_{14}-C_{28}

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 6, pp. 1769-1780

TEXT: Since there are no data available on the most important physical properties of the various alkyl cyclohexanes of the composition C_{14}-C_{20} with branched side chain, the alkyl decalins and the tricyclohexyl alkanes and didecalyl alkanes, an attempt was made here to detect some relationships between heat of combustion by volume and weight, molecular weight, structure, number of naphthene rings, their mutual arrangement in the molecule and the degree of the side chain branching. The following naphthene hydrocarbons were synthesized by hydrogenation of alkyl-aromatic hydrocarbons of the benzene and naphthalene series which were obtained by

Card 1/3

Properties of Naphthene Hydrocarbons of Different Structural Types of the Composition C_{14}-C_{28}

S/079/60/030/06/02/009
B002/B016

the authors for the first time by means of magnesium and lithium-organic compounds: 1) alkyl cyclohexanes with quaternary C-atom in the side chain, 2) 1,1-dicyclohexyl alkanes and 1,1,1-tricyclohexyl alkanes, 3) 1,2-dicyclohexyl ethanes, 4) α-alkyl decalins, 5) 1,1-di-(α-decalyl) alkanes. Furthermore some isoparaffins of the carbon number C_{14}-C_{22} and di- and tricyclohexyl alkanes with cyclohexyl rings distributed along the chain were synthesized by the Grignard-Wurtz reaction. Heat of combustion, solidification point, density, kinematic viscosity at 20° and structure of the compounds were determined. The values are summarized in the table. The heat of combustion was determined in a bomb calorimeter according to ГОСТ 5080-55 (GOST 5080-55), and the solidification point according to ГОСТ 1533-42 (GOST 1533-42). The results show that the heat of combustion by volume of compounds with about the same molecular weight is the higher, the higher the number of the naphthene rings contained in these compounds. It was further found that in the 1,1-di-(α-decalyl)-alkanes the solidification point, the viscosity, and the calorific value by volume decrease with increasing molecular weight. In alkyl cyclohexanes with equal branching degree, however, an increase of these properties is

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Properties of Naphthene Hydrocarbons of Different Structural Types of the Composition C_{14}-C_{28}

S/079/60/030/06/02/009
B002/B016

observable, which reflects the influence of the mutual arrangement of the rings in the molecules. It was further confirmed that the density, the calorific value by volume, and the viscosity increase proportionally to the number of the tertiary, but especially of the quaternary carbon atoms in the side chains. The synthetic procedure is briefly outlined in the experimental part. Synthesis schemes are given. There are 1 table and 20 references: 7 Soviet and 13 American.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk SSSR (Institute of Organic Chemistry of the Academy of Sciences of the USSR)

SUBMITTED: June 7, 1959

Card 3/3

CHEL'TSOVA, M. A.

5.3300 2209 1236 1285

86412
S/062/60/000/008/020/033/XX
B013/B055

AUTHORS: Chel'tsova, M. A. and Petrov, A. D.

TITLE: Synthesis and Properties of Di- and Triphenyl Alkanes of C_{23} - C_{27} Structure and Their Hydrogenation Products. III. Selective Hydrogenation of Several Triphenyl Alkyl Methanes

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1960, No. 8, pp 1445-1450

TEXT: In the previous paper, Ref. 1, several dicyclohexyl phenyl alkyl methanes were obtained by partial hydrogenation of the corresponding triphenyl alkyl methanes. This investigation is continued in the present paper. Selective hydrogenation was carried out at lower temperatures. Triphenyl alkyl methanes of the series $(C_6H_5)_3CR$; (R = C_4, $C_{4\text{-iso}}$, C_6) were partially hydrogenated at 100°C on Rainey Ni or under pressure at 180° on the Bag catalyst. The following new substances were obtained: 1,7-diphenyl 4-hexyl heptane, 1,7-diphenyl 4-cyclohexyl heptane, 1,1-dicyclohexyl 1-phenyl heptane and 1,1-dicyclohexyl 1-phenyl 2-methyl

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86412
S/062/60/000/008/020/033/XX
B013/B055

Synthesis and Properties of Di- and Triphenyl Alkanes of C_{23} - C_{27} Structure and Their Hydrogenation Products. III. Selective Hydrogenation of Several Triphenyl Alkyl Methanes

octane. Hydrogenation of triphenyl alkyl methanes over nickel catalysts yields dicyclohexyl phenyl alkyl methanes and tricyclohexyl alkyl methanes. They can be separated by fractionation and chromatography. Hydrocarbons of structure $(C_6H_{11})_2(C_6H_5)CR$ can be prepared by selective hydrogenation of triphenyl alkyl methanes under optimum conditions (at 140°C on Rainey Ni or at 270°C with the Bag catalyst) in yields of 50%. This renders the method interesting for preparative purposes. The laboratory assistant V. P. Krukhtanova took part in the experiments. There are 2 tables and 8 references: 3 Soviet, 2 French, and 4 German.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: February 12, 1959

Card 2/2

S/081/62/000/001/054/067
B158/B101

AUTHORS: Chel'tsova,M.A., Petrov, A.D.

TITLE: Synthesis and properties of polycyclic C_{20}-C_{30} hydrocarbons having different structures

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 1, 1962, 446, abstract 1M157 ([Tr.] Groznensk. neft. in-t, sb. 23, 1960, 215-217)

TEXT: Results are given of studies of the dependence of physico-chemical properties and viscosity (chiefly solidification point, thermal stability and oxidation stability) on the structure of individual polycyclic hydrocarbons, corresponding in composition to the oil fractions of petroleums. [Abstracter's note: Complete translation.]

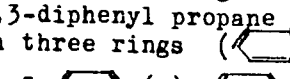
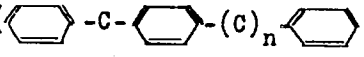
Card 1/1

S/062/61/000/012/006/012
B118/B147

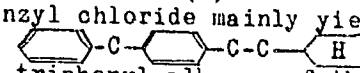
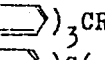
AUTHORS: Chel'tsova, M. A., and Petrov, A. D.

TITLE: Synthesis of triphenyl and tetraphenyl alkanes and study of their hydrogenation

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 12, 1961, 2209 - 2217

TEXT: The present paper deals with the synthesis of triphenyl and tetraphenyl alkanes which contain paraffin links between the benzene rings, since such hydrocarbons ought to be more stable against oxidation at high temperature. Selective hydrogenation of the hydrocarbons obtained allows the formation of mixed hydrocarbons which usually have lower solidification points than aromatic initial hydrocarbons or the corresponding hydrocarbons of the naphthene series. Hydrocarbons with paraffin links between their benzene rings were obtained by alkylation of 1,2-diphenyl ethane and 1,3-diphenyl propane with benzyl chloride. The yield of hydrocarbons with three rings () and with four rings () was 50% and 20%,

Card 1/

respectively (n = 2 or 3). They were subjected to fractional distillation, then separated chromatographically on a column of ACM (ASM) silica gel, and identified. Hydrocarbons were completely hydrogenated in an autoclave under hydrogen pressure at 170°C, on a Raney nickel catalyst. Partial formation of dicyclohexyl alkanes did not take place. Selective hydrogenation of 1-(p-benzyl-phenyl)-2-phenyl ethane (I) obtained by alkylation of 1,2-diphenyl methane and benzyl chloride mainly yielded 1-(p-benzyl-phenyl)-2-cyclohexyl ethane:  (50%). In the case of selective hydrogenation of triphenyl alkanes of the type  , where R = C_4-C_{10}, hydrogenation always proceeds until  hydrocarbons form. In the latter case, two benzene rings are hydrogenated whereas it is only one ring in the former case. For comparison of the hydrogenation capacities of various types of hydrocarbons, 1,7-diphenyl-4-(3-phenyl-propyl) heptane, compound I, and 1,1,1-triphenyl heptane were hydrogenated with PtO_2 at room temperature. The latter was not hydrogenated whereas 1,7-diphenyl-4-(3-phenyl propyl) heptane and 1-(p-benzyl-phenyl)-2-phenyl ethane were hydrogenated into hydrocarbons containing two aromatic rings and one hydroaromatic ring in

a molecule. The hydrogenation rate of the former is 250% of that of the latter. Eleven hydrocarbons so far not described were synthesized. Their data are given in Table 1. There are 9 figures, 2 tables, and 10 references: 5 Soviet and 5 non-Soviet. The two references to English-language publications read as follows: R. Fuson, J. Amer. Chem. Soc. 48, 2437 (1926); P. Serijan, P. Wise, J. Amer. Chem. Soc. 73, 4766 (1951).

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: June 28, 1961

CHEL'TSOVA, M.A.; U-TSZUN-YUY [Wu-TSung-yü]; LUBUZH, Ye.D.

Synthesis and properties of α,α'-bis-(p-benzylbiphenyl).
Izv.AN SSSR.Otd.khim.nauk no.8:1470-1473 Ag '62. (MIRA 15:8)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Biphenyl)

L 9876-63 EPR/EWP(j)/EPF(c)/EPF(n)-2/EWT(m)/BDS/ES(s)-2 AFFTC/ASD/ESD-3/AFWL/
SSD Ps-4/Pc-4/Pr-4/Pu-4/Pt-4 RM/WW/MAY

ACCESSION NR: AP3002260 S/0089/63/014/006/0555/0558

AUTHOR: Sevast'yanov, Yu. G.; Rulanov, L.A.; Smirnov-Averin, A. P.; Kaplan, Ye. P; Nefedov, O. M.; Chel'tsova, M. A.; Petrov, A. D.

TITLE: Thermal and radiation stability of certain aromatic compounds

SOURCE: Atomnaya energiya, v. 14, no. 6, 1963, 555-558

TOPIC TAGS: pyrolysis, radiolysis, Gamma radiation, neutron radiation, thermal stability, radiation stability, polycyclic aromatic hydrocarbons, naphthalene, anthracene, biphenyl, terphenyl, alkylated biphenyls, alkylated terphenyls, diphenyl methane, phenoxybiphenyl

ABSTRACT: The pyrolysis and Gamma radiation induced and neutron-radiation induced radiolysis of a number of polycyclic aromatic hydrocarbons (isopropyl-and phenyl-substituted biphenyls, naphthalenes, and terphenyls; polyphenylenes with methylene bridges between the rings; and phenoxybiphenyl isomers) have been studied. The samples were degassed beforehand to prevent oxidation. A study of pyrolysis at 400C indicated that the stability of biphenyls and terphenyls was two to three orders above that of Alpha-phenylnaphthalene, the alkyl-

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L 9876-63

ACCESSION NR: AP3002260

2

substituted hydrocarbons, and the aromatic ethers. An increase in the number of alkyl substituents in the hydrocarbons decreased their thermal stability. Of the alkyl-substituted hydrocarbons, isopropyl-m-terphenyl was found to be the most stable to decomposition to gaseous products and isopropylbiphenyl the most stable to polymerization. Thermal stability decreased from biphenyl to phenoxybiphenyls. The pyrolysis kinetics was studied by additional pyrolysis of the most stable compound, m-terphenyl, at 194, 475, and 459C. From the results obtained, rate constants of pyrolysis were calculated, and activation energy was found to be about 70 kcal/mol. Pyrolysis at 410C of polyphenylenes with methylene bridges between the rings revealed that their thermal stability was three orders below that of m-terphenyl. In experiments with irradiation of the hydrocarbons in a neutron field (10 sup 13 n/cu cm sec) at 60 and 350C, m-terphenyl was found to be the most stable of all the compounds. An increase in temperature from 60 to 350C increased radiation-induced decomposition by a factor of 3.8. From Gamma-irradiation experiments (dose, 10 sup 21 ev/g) it was found that the energy absorbed was not sufficient to produce radiolytic decomposition of biphenyl, terphenyls, or phenylnaphthalenes. It was concluded that the superior thermal and radiation stability shown by biphenyl and by the terphenyl isomers makes them suitable as heat transfer agents for nuclear power reactors. Orig. art. has: 5 tables.

Card 2/3

CHEL'TSOVA, M.A.; PETROV, A.D.; LUBUZH, Ye.D.; YEREMEYEVA, T.I.

Synthesis and selective hydrogenation of tri- and pentaphenylalkanes. Izv. AN SSSR Ser. khim. no.1:124-133 '65. (MIRA 18:2)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

PETROV, A.D. [deceased]; CHEL'TSOVA, M.A.; KOMAROVA, S.D.

Reaction of organolithium compounds of p-bromobiphenyl and p-bromo (chloro) diphenylmethane with dimethyldichlorosilane and germane. Izv. AN SSSR. Ser. khim. no.3:550-552 '65. (MIRA 18:5)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

21041

S/058/61/000/005/050/050
A001/A101

6.5200
9.7910

AUTHOR: Chel'tsova, M.S.

TITLE: Magnetic tape of type 3

PERIODICAL: Referativnyy zhurnal. Fizika, no 5, 1961, 424, abstract 5Zh770 ("Tr. Vses. n.-i. in-ta zvukozapisi, 1959, no 6, 73 - 87)

TEXT: The author describes technology of manufacturing magnetic tape of type 3 on acetate and fluorophol ("ftorofol'") base. Tape of type 3 differs from that of type 2 by the following features: 1) acicular fine-dispersed gamma-oxide of iron possessing high magnetic characteristics is used for ferro-varnish; 2) surface-active substances are introduced into the composition of ferro-varnish; 3) magnetic orientation of the powder in the coated layer is used; 4) calendering of the coated film is used with the purpose of increasing the volume concentration of the powder in the ferro-layer. The composition and conditions of preparing ferro-varnish are given. The grinding of ferro-yarnish is performed in the ball mill, the time of treatment amounting up to 71 hours. Acicular shape of the powder particles does not change during treatment. There is a relation between the electro-acoustic properties of the tape and the composition and condi-

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Magnetic tape of type 3

S/058/61/000/005/050/050
A001/A101

tions of preparing ferro-varnish, magnetic orientation of the powder in the ferro-layer, and degree of calendering of the finished tape. Three methods of magnetic orientation of acicular powders are investigated: 1) in the field of constant magnets installed along the direction of motion of the metallic tape of the coating machine at a distance of 2-3 mm above and below it, the poles of the same sign facing one another; 2) in the field of intensity amounting up to 1,500 oe generated by a solenoid supplied with direct current; 3) in the field of a tubular solenoid supplied with alternate or direct current of up to 2,000oe intensity. It is noted that fine-dispersed acicular powders are oriented with greater difficulties than coarse-dispersed. Magnetic orientation improves essentially electro-acoustic characteristics of the tape, especially sensitivity and non-linear distortions, however, a certain worsening of frequency characteristic is observed. In calendering, mechanical properties do not change, but electro-acoustic characteristics, in particular frequency characteristic, are improved. The degree of compactness of the ferro-layer depends mainly on the composition of ferro-varnish, dimensions of powder particles and pressure of the calender. Tape of type 3 excels tape of type 2 in electro-acoustic properties and is at the level of one of the best foreign tapes of type "Scotch III A". There are 18 references. S. Neduzhiy
[Abstracter's note: Complete translation.]

Card 2/2

BOGATYREV, P.M.; CHEL'TSOVA, M.S.; SHABANOVA, M.G.

Aluminum-containing compounds for the paint and varnish industry (survey of the literature). Lakokras.mat.i ikh prim. no.1:81-84 '63. (MIRA 16:2)
(Aluminum organic compounds)
(Paint materials)

L 41060-65 EWG(j)/EWA(h)/EWP(j)/EWT(m)/T/EWA(1) Pc-4/Peb RM

ACCESSION NR: AP5007138 S/0303/65/000/001/0006/0011

AUTHOR: Chel'tsova, M.S.; Bogatyrev, P.M.; Kushnarenko, N.A.

TITLE: Effect of some aluminum chelates on the resistance of alkyd coatings to ultraviolet radiation

SOURCE: Lakokrasochnyye materialy i ikh primeneniye, no. 1, 1965, 6-11

TOPIC TAGS: alkyd resin, alkyd coating, aluminum chelate, polymer radiation resistance, ultraviolet radiation, acetoacetic ester, salicylic acid, dihydroxybenzophenone, glyphthalic resin, pentaphthalic resin, polymer oxidation

ABSTRACT: The authors studied the strengthening effect of Al-monochelates with acetoacetic ester (1), salicylic acid (2), 2, 4-dihydroxybenzophenone (3) and the phenyl ester of salicylic acid (4), as well as of mixed Al-bichelates with acetoacetic ester and salicylic acid (5), and with acetoacetic ester and 2,4-dihydroxybenzophenone (6), on the UV resistance of FL-50 glyphthalic and pentaphthalic resin films with linseed oil additions. The chelates (see Fig. 1 of the Enclosure) were prepared by the addition of the corresponding chelatophores to solid aluminum isobutylate (7) with subsequent partial distillation of the liberated isobutyl alcohol and solvent at bath temperatures up to 140-160C. The peroxide numbers of the blends indicating the content of active oxygen, and the copper numbers,

Card 1/2

L 41060-65

ACCESSION NR: AP5007138

2

characterizing the ability to form complex compounds, were determined by Bogatyrev's and Sedlacek's methods, respectively, as the principal characteristics of the oxidation mechanism in film formation. The chelates were found to blend well with alkyd resins containing linseed oil without affecting film drying, and to increase the UV resistance of naturally and forcibly aged coatings. A suggestion is made that the protective action is linked with the absorption of UV rays by the chelates and with the interaction of AL with the oxidation products of oil-containing alkyd resins. "R. V. Anokhina and G. V. Rudnaya assisted in the experiments." Orig. art. has: 7 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 01 SUB CODE: MT

NO REF SOV: 008 OTHER: 018

Card 2/3

BOGATYREV, P. M.; CHEL'TSOVA, M. S.

"Primeneniye nekotorykh vnutrikompleksnykh soedineniy alyuminiya dlya fotostabilizatsii alkidnykh pokrytiy."

report submitted for 35th Intl Cong, Industrial Chemistry, Warsaw, 15-19 Sep 64.

L 1347-66 EWT(m)/EPF(c)/EWP(j)/T RPL RM/WW

ACCESSION NR: AP5024383 UR/0286/65/000/015/0067/0067
667.643

AUTHOR: Bogatyrev, P. M.; Loseva, N. S.; Shabanova, A. G.; Yermolayeva, N. V.; Chel'tsova, M. S.

TITLE: A method for producing enamel. Class 22, No. 173362

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 67

TOPIC TAGS: enamel, protective coating, polymer, organoaluminum compound

ABSTRACT: This Author's Certificate introduces a method for producing enamel based on chlorosulfonated polyethylene, a cross-linking agent, pigments and solvents. The physical and mechanical properties of the coating are improved by using an aluminum monochelate (aluminum diisobutoxymonoacetoacetate) as the cross-linking agent.

ASSOCIATION: none

SUBMITTED: 02Mar63 ENCL: 00 SUB CODE: MT, OC

NO REF SOV: 000 OTHER: 000

Card 1/1

VALYUZHINICH, Ye.N.[deceased]; GERASIMOVA, A.V.; KARTAVCHENKO, P.K.; CHEL'TSOVA, Yu.S.

Polyphenoloxidase treatment of cognac spirits and cognacs accelerating their maturation. Biokhim. vin. no.6:16-30 '60. (MIRA 13:10)

1. Moskovskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta vinodeliya i vinogradarstva "Magarach".
(Brandy) (Phenolase)

CHELUKHOV, M. V.

Deputy People's Commissar of Machine-Tool Building USSR (1943).

"Measures to Improve Tool Making", Stanki I Instrument, 14, No. 11-12, 1943.

CHELUKHOV, M.V.

Introducing engineer Ovchinnikov's invention. Izobr. v SSSR 1 no.6: 31 D '56. (MLRA 10:4)

1. Zamestitel' ministra stankostroitel'noy i instrumental'noy promyshlennosti.
(Drilling and Boring machinery)

USSR/Human and Animal Physiology - Thermoregulation. T-3

Abs Jour : Ref Zhur - Biol., No 7, 1958, 31550

Author : Metelitsa, V.I., Kaminskaya, L.R., Chelukhova, Ye.M.

* Inst : -

Title : Investigation of Gaseous Exchange During Hypothermia.

Orig Pub : Eksperim. khirurgiya, 1956, No 5, 24-31.

Abstract : During physical and combined cooling of dogs (20) to 35-27° and lower, gaseous exchange dropped with the fall of temperature. Ventilation of the lungs fell faster than the O_2 requirement. Warming usually led to a sharp increase of gaseous exchange. Below 35° fibrillated twitchings appeared of voluntary and smooth (singultation, egestion) misculature. With the beginning of warming the trembling dissappeared. Gaseous exchange and ventilation subsequently increased with trembling and dropped sharp during its cessarion (additional introduction of hexenal). Considering the trembling as an indication of the

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* Iz kafedry topograficheskoy anatomii i operativnoy khirurgii I [illegible] ordena Lenina meditsinskogo instituta imeni I M. Sechenova.

Abs Jour : Ref Zhur - Biol., No 7, 1958, 31550

absence of sufficient inhibition of the CNS, the authors negate the onset of the "cold narcosis" with a body temperature of 28°. The delays of the fall of the body temperature noted in the determined stages of cooling were accompanied by a temporary rise of the O_2 requirement. Proteins and fats are used mainly with hyperthermia under narcosis. A loss of weight by the animals at the end of the experiment comprising maximally 3.1% of the original is reported by the authors not only due to the loss of mousture but also due to the energy waates of the organism during hypothermia.

KOTSYUBINSKIY, O.Yu.; SYSOYEV, S.I.; GERCHIKOV, A.M.; SEMENOV, V.N.; CHELUSHKIN, A.S.

Selecting cast-iron brands for the manufacture of machine-tool base parts. Stan. i instr. 34 no.10:18-21 O '63. (MIRA 16:11)

TALANOV, P.I.; CHELUSHKIN, A.S.

Apparatus for testing materials for wear in reciprocating motion. Zav. lab. 30 no.5:613-614 '64. (MIRA 17:5)

1. Moskovskiy stankoinstrumental'nyy institut.

TALANOV, P.I.; CHELUSHKIN, A.S.

Wear resistance of grey cast iron during abrasive wear. Lit. proizv. no.3:25-27 Mr '64. (MIRA 18:9)

CHELUSTKIN, A. B.

"Electroautomation of rolling mills," Metallurgizdat, 1952.

CHELUSTKIN, A. B.

4496

KATSNEL'SON, M. YE., OZOL', V. L. I CHELUSTKIN, A. B. Avtomatizatsiya Truboprokatnykh Stanov. M., Metallurizdat, 1954. 111 s. s ill. ; il. Skhem, 22 sm. 2700 Ekz. 3 R. 55 K. -(55-339) P 621. 744. 35-52.

SO: Letopis' Zhurnal'nykh Statey, Vol. 37, 1949

CHELUSTKIN, A. B., Master Tech Sci — (USSR) "The automation of [redacted] power drives and mechanisms in a blooming mill." Moscow, 1957. 19 pp (AS USSR. Inst of Automation and Telemechanics), 100 copies. (KL, No 39, 1957)96

CHELYADIN, L.G., gornyy master

Battery lamps. Bezop. truda v prom. 2 no.7:37 Jl '58. (MIRA 11:9)

1. Shakhta Komsomol'skaya No.1 Dnepropetrovskogo sovnarkhoza.
(Mine lighting)

CHELYADINOV, G.I., prof.

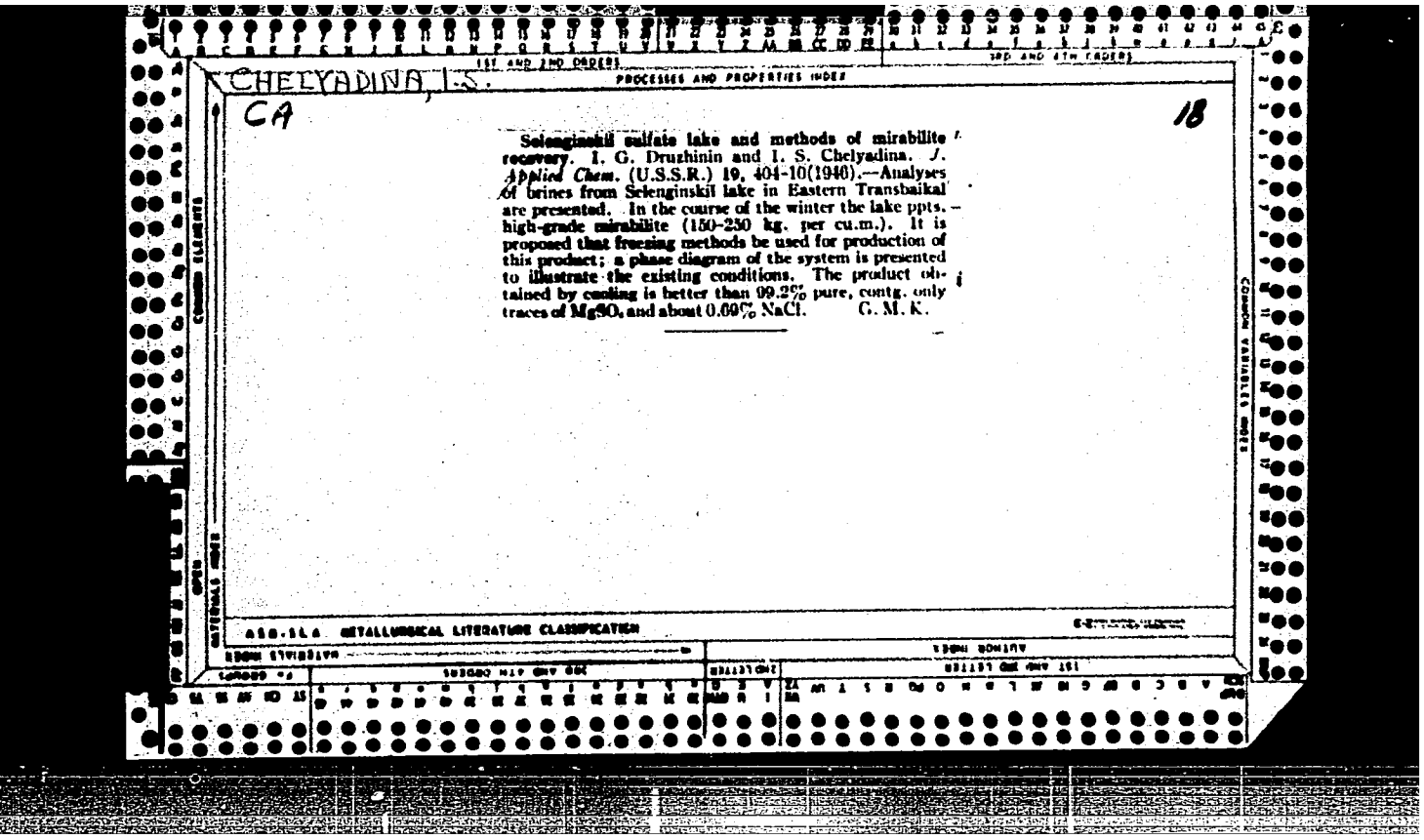
[Efficient use of fertilizers in the agriculture of Stavropol Territory] Ratsional'noe primenenie udobrenii v polevodstve Stavropol'ia. Stavropol', Stavropol'skoe knizhnoe izd-vo, 1964. 23 p. (MIRA 18:8)

1. Stavropol'skiy sel'skokhozyaystvennyy institut.

CHELYADINOV, G.I., prof.

Nitrifying capacity as an objective indicator of the fertility of soil. Agrobiologiia no.5:722-725 S-O '65. (MIRA 18:9)

1. Stavropol'skiy sel'skokhozyaystvennyy institut.



CHELYADINA, L.S.

CA

18

Selenginskii sulfate lake and methods of mirabilite recovery. I. G. Druzhinin and L. S. Chelyadina. *J. Applied Chem.* (U.S.S.R.) 19, 404-10(1946).—Analyses of brines from Selenginskii lake in Eastern Transbaikal are presented. In the course of the winter the lake ppts. high-grade mirabilite (150-250 kg. per cu.m.). It is proposed that freezing methods be used for production of this product; a phase diagram of the system is presented to illustrate the existing conditions. The product obtained by cooling is better than 99.2% pure, contg. only traces of $MgSO_4$ and about 0.69% NaCl. G. M. K.

J

Country : USSR
Category: Soil Science. Soil Biology.

Abs Jour: RZhBiol., No 14, 1958, No 63050

Author : Chelyadinov, G.I.
Inst : Stavropol Agricultural Institute
Title : The Influence of Mineral Fertilizers on the Nitrifying Capacity of Ciscaucasian Chernozems.

Orig Pub: Tr. Stavropol'sk. s.-kh. in-ta, 1956, vyp. 7, 73-84

Abstract: The results of laboratory experiments with samples of the upper (0-25 cm) horizon of western Ciscaucasian and Central chernozems are presented. Ammonium carbonate and NH_4 reinforced the nitrifying capacity of the soils, Na and ammonium nitrate, less the introduction of ammonium chloride decreased the process of nitrification. Calcium cyanamide, P_2S and all

Card : 1/2

Country : USSR
Category: Soil Science. Soil Biology.

Abs Jour: RZhBiol., No 14, 1958, No 63050

potassium fertilizers (especially those containing chlorine) caused a reduction in the processes of nitrification. A consecutive increase in absolute quantities of nitrates was observed as to time and dependence upon soil moisture (30.45 and 60% of total moisture capacity). -- V.A. Molodtsov

Card : 2/2

18(3)

AUTHORS: Filippov, S. I., Yakovlev, V. V., Chelyadinov, L.M.

SOV/163-59-2-3/48

TITLE: The Kinetic Factors of Interaction Between Metal Melt and Oxidizing Atmosphere in the Rotary Induction Furnace (O kineticheskikh faktorakh vzaimodeystviya metallicheskogo rasplava s okislitel'noy atmosferoy vo vrashchayushcheysya induktsionnoy pechi)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1959, Nr 2, pp 15 - 19 (USSR)

ABSTRACT: This report deals with experiments in which a magnesite crucible with liquid iron was tilted and slowly rotated (8 - 10 rpm); the oxidizing atmosphere (50% CO_2 + 50% O_2) was supplied to the metal either on the surface or by an immersed quartz tube into the interior. The experimental plant is illustrated in figure 1. Figures 2 and 3 show the course, with respect to time, of the oxidation of carbon, manganese and silicon in dependence on the intensity of the gas supply. The results are as follows: With a rise in the supply of the oxidizing gas phase, the oxidation of the impurities

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increases. The other variations of the experiment, rotation, supply of gas on the surface or into the interior, proved to be ineffective. The authors explain this circumstance by the fact that the electromagnetic intermixture in the induction furnace was much more intensive, and therefore concealed the other effects including that of slow rotation.
There are 3 figures and 2 Soviet references.

ASSOCIATION: Moskovskiy institut stali
(Moscow Steel Institute)

SUBMITTED: November 10, 1958

RYZHONKOV, D.I.; GOLENKO, D.M.; CHELYADINOV, L.M.

Equipment for the study of the kinetics of oxide reduction by solid carbon at high temperatures. Izv.vys.ucheb.zav.: chern.met. no.4:19-22 '60. (MIRA 13:4)

1. Moskovskiy institut stali.
(Metallurgical laboratories--Equipment and supplies)

CHELYADINOVA, A.

Diary of a trade-union group organizer. Sov.profsoiuzy 19 no.2:11 Ja '63. (MIRA 16:2)

1. Organizator profsoyuznoy gruppy ispytatel'noy stantsii Moskovskogo kabel'nogo zavoda.
(Trade unions—Handbooks, manuals, etc.)

CHELYADINOVA, A. I., SUDAKOVA, A. V.

Tree Basil

Interrelations of tree basil and its microflora. Agrobiologiia, No. 4, 1952 .

Monthly List of Russian Accessions, Library of Congress November 1952 Unclassified

1. CHELYADINOVA, A. I.; NAUMOVA, A. N.

2. USSR (600)

4. Water Parsnip

7. Disease in water parsnip (Sium latifolium) upon destruction of its symbiosis with root microflora, Dokl. Ak. sel'khoz, 18, No. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

1. CHELYADINOVA, A. I.

2. USSR (600)

4. Trees

7. Sprouting of tree seeds. Les. khoz., 6, No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress. May 1953. Unclassified.

CHELYADINOVA, A. I.

"Biology of the Resting Period of Seeds of Wood Species," Lomonsov Lectures in 1956, Vest. Mosk. U., Physico Math and Natural Sciences Series, 4, No. 6, pp 147-160, 1956, Biological Faculty

Translation U-3,694,363

USSR / Forestry. Forest Cultures K-5

Abs Jour: Ref Zhur-Biol., No 10, 1958, 43954

Author : Chelyadinova, A. I.

Inst : Moskovshiy gosucarstvennyy universitet imeni M. V. Lomonosova.

Title : The Adaptational Significance of the Quiescent Period in Tree Seeds

Orig Pub: Agrobiologiya, 1957, No 2, 94-100

Abstract: This study characterizes the basic biological fruit bearing peculiarities of a series of the forest trees (elm, oak, ash, pine, and others) and also the peculiarities of the quiescence and germination of their seeds. By using Fraxinus excelsior and Acer tataricum as examples, the basic regularity in the adaptation of the seeds to win-

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Abs Jour: Ref Zhur-Biol., No 10, 1958, 43954

tering in a dormant state was determined. It is noted that the after-harvest completion of maturing may be regarded as one of the phases of the seed ripening. This phase is characterized by the direction of the fermentative processes to synthesis. The processes related to the quiescent period are reversible in contrast to vernalization. The author's experiments establish that the summer sowing of stratified seeds with uncompleted rest periods did not accelerate germination. The rest period was reduced by the effect of high temperature and germination took place only the following spring. - L. V. Nesmelov

USSR/Cultivated Plants - Fruits. Berries. M

Abs Jour : Ref Zhur Biol., No 12, 1958, 53764

Author : Cholyadinova, A.I., Nikitskaya, K.I.
Inst :
Title : Biological Control of the Development and Growth of the Buds of Fruit and Berry Plants.

Orig Pub : Nauka i perolov, opyt s. kh., 1957, No 7, 48-49

Abstract : Studies of the morphological structure of the fruit buds and also of the degree of their differentiation before winter quiescence and the subsequent development of blossoms in spring were conducted at Moscow University on the following: Siberain crabapple, Vladimir cherry (Prunus cerasus austera), and black and golden currents. The blossoms of the Vladimir cherry have - before retiring for the winter - fully formed outer covering organs (calyx and corolla), a developed pistil, and only incipient stamen protuberances. The pollens, the stamen

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Abs Jour : Ref Zhur Biol., No 12, 1958, 53764

fibers form in spring. Also in spring the formation of the pistil is completed. In the case of the Siberian crabapple tree, the differentiation of the blossom is less pronounced: the pistil formation and the full development of the stamens and of the corolla takes place in the spring, with the advent of warmer temperatures. In the case of the black and golden currant, the stamens outstrip the other organs and become well developed by winter. On the other hand, the pistil and the corolla become fully formed in spring. It is recommended to carry out regular observations on the progress of bud formation in the fruit and berry cultures for the purpose of yield forecests and for planning agrotechny. -- A.A. Gudzenko

COUNTRY : USSR
CATEGORY : Forestry. Biology. Typology. K

ABS. JOUR. : RZhBiol., No. 23 1958, No. 104503

AUTHOR : Chelyadinova, A.; Nikitskaya, K.
INST. :
TITLE : Biological Control for the Development and Growth of the Flower Buds of Woody Plants

ORIG. PUB. : Nauka i peredov. opyt v s. kh., 1958, No. 2, 47-49

ABSTRACT : Results are described of observations on the formation of flower buds by goat willow (Salix caprea), Siberian peashrub, the Tatarian and Norway maples (Acer platanoides L.). A detailed description is given of the formation of buds by stages, and the stages of formation of inflorescence and flower are shown graphically. In the formation of inflorescence and flower, two periods are distinguished: the summer-autumn of the preceding year and the spring period in the year of flowering. The conclusion is drawn that spring in the life of woody plants is the most vital period; then it is necessary to create good

Card: 1/2

COUNTRY :
CATEGORY : K

ABS. JOUR. : RZhBiol., No. 23 1958, No. 104503

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : conditions of nutrient and water supply for the plantings in order to guarantee normal development of buds, the formation of seeds, and the setting of new flower buds for the coming year.--V. I. Klimov

Card: 2/2

3

ALEKSANDROV, V.G., prof., red.; DVORYANKIN, F.A., prof., red.; KADEN, N.N., kand. biol. nauk, red.; KUPERMAN, F.M., prof., red.; L'VOVA, I.N., kand. biol.nauk, red.; PALAMARCHUK, I.A., kand.biol.nauk, red.; PODDUBNAYA-ARNOL'DI, V.A., prof., red.; PRONIN, V.A., kand.biol.nauk, red.; RZHANOVA, Ye.I., kand. biol.nauk, red.; ROSTOVTSEVA, Z.P., kand. biol.nauk, red.; SEREBRYAKOV, I.G., prof., red.; USTINOVA, Ye.I., kand. biol.nauk, red.; CHELYADINOVA, A.I., kand. biol.nauk, red.; YERMAKOV, M.S., tekhn. red.

[Morphogenesis in plants; transactions dedicated to the 100th anniversary of the publication of Darwin's "Origin of species."] Morfogenez rastenii; trudy posveshchaiutsia 100-letiiu so dnia vykhoda v svet truda Charlza Darvina "Proiskhozhdenie vidov." Moskva, Izd-vo Mosk. univ. Vol.1. 1961. 683 p. (MIRA 14:9)

1. Soveshchaniye po morfogenezu rasteniy, 1959.
(Botany--Morphology)

CHELYADINOVA, A.I.; KUKOLEV, P.A.

Biological basis for the propagation of damask roses using hardwood cuttings. Agrobiologiia no.3:431-437 My-Je '65. (MIRA 18:11)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova, biologo-pochvennyy fakul'tet, i Krymskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta maslichnykh i efiromaslichnykh kul'tur.

OSIPOVA, A.V.; CHELYADINOVA, G.V., red.; YEROFEYEV, I.A., red.; KREYS, I.G., tekhn.red.

[Siberia and the Far East; book of readings on the physical geography of the U.S.S.R.] Sibir' i Dal'nii Vostok; kniga dlia chteniia po fizicheskoi geografii SSSR. Moskva, Gos. uchebno-pedagog.izd-vo M-va prosv.RSFSR, 1960. 116 p. (MIRA 14:1)

(Siberia--Physical geography)
(Soviet Far East--Physical geography)

L 28428-66 EWT(1)/T JK

ACC NR: AP6019114 SOURCE CODE: UR/0016/65/000/011/0057/0061

AUTHOR: Vershilova, P.A.; Chernysheva, M.I.; Chelyadinova, Ye. B.

ORG: Institute of Epidemiology and Microbiology, im. N.F. Gamaleya, AMN SSSR (Institut epidemiologii i mikrobiologii AMN SSSR)

TITLE: Quantitative determination of blood opsonins in brucellosis

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 11, 1965, 57-61

TOPIC TAGS: brucellosis, blood serum, pathology

ABSTRACT: A determination of blood serum opsonins by Victor's method revealed that in the early stages of brucellosis in guinea pigs, when Brucella are found only in the regional lymph nodes and there is a morphologically indistinct response by the reticuloendothelial system, the opsonic titer in the animals' blood serum was lower than zero. However, in the period of generalized infection (from 15 days to 3-4 months after infection with Br. melitensis), the animals' serum contained 10-100 opsonic units in the presence of a pronounced pathological process in the organs. Six to 12 months after infection, if Brucella were eliminated from the animals but pathological changes still persisted, the blood opsonins remained on a high level.

The authors recommend that the method of quantitative determination of blood opsonins be combined with other techniques to study not only brucellosis in human beings and animals, but also the vaccine process and immunity in this disease. Orig. art. has: 1 table. /JPRS/

SUB CODE: 06/ SUBM DATE: 05Sep64/ OTH REF: 005

Card 1/1

UDC: 616.891.42-07:616.15-097.4-074:543.062

GOLUBEVA, A.A.; CHELYADINOVA, Ye.B.

Distribution of brucellosis among the population of some European countries during the last decade (1951-1960). Vest. AMN SSSR 19 no.8:28-36 '64. (MIRA 18:7)

1. Institut epidemiologii i mikrobiologii imeni N.F. Gamaleia AMN SSSR, Moskva.

VERSHILOVA, P.A.; CHERNYSHEVA, M.I.; CHELYADINOVA, Ye.B.

Quantitative determination of blood opsonins in Brucella infection. Zhur. mikrobiol., epid. i immun. 42 no.11:57-61 N '65. (MIRA 18:12)

1. Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR. Submitted Sept. 5, 1964.

CHELYASHEV, P., inzh.

For an accurate and continuous determination of the position of dredgers. Mor. flot 22 no.11:38-39 N '62. (MIRA 15:12)

1. Glavnoye upravleniye portovogo khozyaystva i morskikh putey Ministerstva morskogo flota.
(Dredging machinery) (Radar in navigation)

CHELYSHEV, A.A.

Units for building up rails. Put' i put. khoz. no.5:24-25
My '59. (MIRA 12:8)

1.Nachal'nik rel'sosvarochnogo poyezda, g. Kryukov-na-Dnepre.
(Railroads--Rails--Welding)

BARSKYAK, A.Sh., kand. tekhn. nauk; CHELYSHEV, A.N., inzh.;
KIESHOV, B.A., inzh.

Filtration characteristics of porous concrete drain pipes.
Transp. stroi. 15 no.11:45-46 N '65. (MIRA 18:11)

PONOMAREV, Vladimir Aleksandrovich; CHELYSHEV, Arkadiy Mikhaylovich; VOLKOV, P.N., red.; SAVEL'YEVA, Z.A., tekhn. red.

[Safety measures in grain-receiving enterprises]Tekhnika bezopasnosti na khlebopriemnykh predpriiatiiakh. Moskva, Zagotizdat, 1962. 134 p. (MIRA 15:11)
(Grain handling—Safety measures)

TARASOV-AGALAKOV N.; VOZYAKOV, V.; GOLUBEV, S.; LAVROV, D.; ANANOV, I.; GELAKH, V.; BOLANIN, N.; KASHCHENKO, V.; MAKAROV, M.; GOLOSTIN, M.; ZHAMENSKIY, N.; DZHALALOV, Ye.; GLEBOV, V.; CHELYSHEV, F.; D'YAKOV, N.; BRAUN, P.

Georgii Innokent'evich Zhukov; obituary. Posh.delo 5 no.7:32 Jy '59. (MIRA 12:9)
(Zhukov, Georgii Innokent'evich, d.in 1959)

CHELYSHEV, F.

Flagship of the river fleet. Pozh.dele 5 no.8:28 Ag '59.
(MIRA 12:12)

(Ships)

LUPICHEV, N.P., insh.; CHELYSHEV, F.S.; ZUBKOV, P.M.

Use of inert (smoke) gases for the transportation of petroleum products and the repair of oil tank vessels. Proizv.-tekh. sbor. no.3:50-66 '59. (MIRA 13:10)
(Tank vessels) (Petroleum industry--Safety measures)

CHELYSHEV, I. I.

Automation of the operations of rectification apparatus.
Spirt. prom. 29 no.3:37-40 '63. (MIRA 16:4)

1. Dublyanskiy spirtovoy zavod.

(Distilling apparatus) (Automation)

45027

S/109/63/008/001/004/025
D262/D308

AUTHORS: Tikhonov, V. I. and Chelyshev, K. B.

TITLE: Peaked trace of the phase cosine of quasiharmonic oscillations

PERIODICAL: Radiotekhnika i elektronika, v. 8, no. 1, 1963, 24-31

TEXT: Experimental equipment for the study of the phase cosine of quasiharmonic oscillations is described and some statistical characteristics are presented. The apparatus consisted of a 50 kc/s oscillator with a phase-shifter and of a noise generator with a narrow band amplifier and a limiter, both feeding a phase detector. Statistical characteristics of cosine pips were investigated with only quasiharmonic noise at the input of the detector, as well as with the sum of signal and noise. The output voltage of the phase detector is approximately proportional to $\cos\psi(t)$ where $\psi(t)$ is the random phase of signal and noise, provided the limiter threshold is kept at or below 0.35 of the mean-square value of noise. This was checked by comparing theoretical probability density of

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Peaked trace of ...

the noise phase cosine with experimental density of the output voltage, at various threshold levels. Reference voltage of the input of the detector was always kept at least 10 times higher than the threshold, and its phase was 0, 45, or 90°. Signal/noise ratios used in measurements were 0, 1 and 3. Results are shown in oscillograms of voltage waveforms at the detector output, in various measuring conditions, in graphs of the duration of voltage pips, and in a table of values of basic parameters of the phase cosine characteristics. When only noise is present, pip duration and its mean-square dispersion have minimal values for zero relative level of the detector output, and they both increase when relative levels are either side of zero. In the presence of signal and noise, with phase difference between signal and reference voltage contained between 0 and 90°, pip duration and its mean-square dispersion become smaller as the pip level is greater. The duration and its dispersion depend on the signal/noise ratio and on the phase difference between signal and reference voltage, when fixed pip level is considered. There are 12 figures and 1 table.

SUBMITTED: December 29, 1961

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S/109/63/008/002/020/028
D413/D308

AUTHORS: Tikhonov, V.I. and Chelyshev, K.B.

TITLE: The statistical dynamics of phase-type automatic frequency control

PERIODICAL: Radiotekhnika i elektronika, v. 8, no. 2, 1963, 331-334

TEXT: The first author has shown (Avtomatika i telemekhanika, v. 20, no. 9, 1959, 1188; v. 21, no. 3, 1960, 301) that under certain conditions the effect of fluctuation noise on a phase-type AFC is to induce a residual mistuning, and has verified this practically (Radiotekhnika, v. 17, no. 9, 1962, 42); here a physical explanation is given of the manner in which this phenomenon arises, based on experimental results for a typical system presented with a harmonic signal plus stationary normal broadband noise. It is shown that in presence of noise two modes of AFC operation are possible, synchronous and asynchronous. The synchronous mode occurs with low-amplitude noise, and in it there are additional systematic and random

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phase-difference errors due to the detection of noise in the nonlinear phase detector. The asynchronous mode occurs with large-amplitude noise, and is characterized by the appearance of random phase-jumps. The transition between the modes is smooth. Recommendations are made on quantitative criteria for the transition point between the two modes. There are 3 figures.

SUBMITTED: July 25, 1962

L 18407-63 EWT(d)/BDS AFFTC/ASD/APGC/IJP(C) Pg-4/Pk-4/Pl-4/Po-4/
Pq-4 - BC

ACCESSION NR: AP3003741 S/0103/63/024/007/0942/0949 74

AUTHOR: Chely*shev, K. B. (Kiev)

TITLE: Effect of external noise on phase-locked automatic systems

SOURCE: Avtomatika i telemekhanika, v. 24, no. 7, 1963, 942-949

TOPIC TAGS: noise, phase-locked system

ABSTRACT: With a low fluctuating-noise level, slight phase swinging about the steady-state position can result in random phase errors. With a high noise level, the errors may be large and even a "slip" of a few cycles may occur. The latter effects are nonlinear; hence, the distribution of random phase under steady-state conditions in a closed phase-locked system is investigated in the article by Markov's process. Further, phase phenomena with "slips" are considered: With accumulation of "slips," the final effect depends on the initial detuning between the two oscillators. With zero initial detuning, the average frequency

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ACCESSION NR: AP3003741

will not change; otherwise, the average frequency may shift (a residual detuning). The above theoretical considerations were verified experimentally; the oscillograms presented in the article supply a qualitative corroboration. Orig. art. has: 7 figures and 27 formulas.

ASSOCIATION: none

SUBMITTED: 03Aug62	DATE ACQ: 02Aug63	ENCL: 00
SUB CODE: IE	NO REF SOV: 005	OTHER: 000

Card 2/2

TIKHONOV, V.I.; CHELYSHEV, K.B.

Conversion of the phase of self-oscillations by resonant systems.
Radiotekh. i elektron. 9 no.8:1503-1506 Ag '64. (MIRA 17:10)

CHELYSHEV, L.A.

Vascular pathology and its role in various types of course of presenile depression. Zhur. nevr. i psikh. 64 no.2:245-249 '64. (MIRA 17:5)

1. Otdel psikhiatrii (nauchnyy rukovoditel' - doktor med. nauk A.I. Ploticher) Ukrainskogo nauchno-issledovatel'skogo psikho-nevrologicheskogo instituta (direktor O.R. Stepanenko), Khar'kov.

CHELYSHEV, N. A.

"Process of Cutting Metals With Shears Having Parallel Blades." Sub 15 Oct 51, Central Sci Res Inst of Technology and Machine Building (TsNIITMash)

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

CHELYSHEV, N.A., kand.tekhn.nauk

Investigating the cutting process with shears having parallel blades and ways to improve it. Obr.met.davl. no.2:236-252 '53. (MIRA 12:10)

1. Sibirskiy metallurgicheskiy institut.
(Shears (Machine tools))

CHELYSHEV, Nikolai Aleksandrovich.

Worker at a section mill rolling press; textbook. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1954. 187.1 p. (55-41082)

TS340.M5

1. Rolling-mills. I. Chelyshev, Nikolai Aleksandrovich.

SKOROKHODOV, M.Ye., kandidat tekhnicheskikh nauk, dotsent; GOLUBEV, T.M., professor, doktor tekhnicheskikh nauk; ZAYKOV, M.A., kandidat tekhnicheskikh nauk; CHELYSHEV, M.A., kandidat tekhnicheskikh nauk, dotsent; KOROLEV, A.S., inzhener; OSHIN, V.I., inzhener.

Determining acting forces in friction and eccentric presses. Trudy Sib.met.inst. no.2:19-29 '55. (MLRA 9:12)

(Strains and stresses) (Power presses)

CHELYSHEV, N.A., kandidat tekhnicheskikh nauk.

Pressure resistance in the minor deformations range. Trudy Sib. met.inst. no.2:56-61 '55. (MLRA 9:12)

(Deformations (Mechanics))
(Forging)

CHELYSHEV, N.A.

SOKOLOV, L.D., professor, doktor tekhnicheskikh nauk; ZAYKOV, M.A., kandidat tekhnicheskikh nauk, dotsent; CHELYSHEV, N.A., kandidat tekhnicheskikh nauk.

Experimental study of specific flow stresses during extrusion pressing. Trudy Sib.met.inst. no.2:62-68 '55. (MLRA 9:12)

(Extrusion (Metals)) (Strains and stresses)

SOV/124-58-5-5820

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 5, p 128 (USSR)

AUTHOR: Chelyshev, N. A.

TITLE: Metal Cutting by Shears With Parallel Blades (Rezaniye metallov na nozhnitsakh s parallel'nymi nozhami)

PERIODICAL: Tr. Sibirsk. metallurg. in-ta, 1955, Nr 2, pp 109-148

ABSTRACT: A semiempirical theory in which cutting is considered as the sum of elementary deformational processes of bending, pressure, shearing, and stretching.

G. S. Shapiro

1. Metals--Deformation
2. Metal cutting shears--Performance
3. Metals--Theory

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Chelyshev, N. A.

1

Investigation of the Working Conditions of a Medium-Sheet Mill. N. A. Chelyshev. (*Stal'*, 1955, 15(5), 440–444). [In Russian]. Experiments carried out on a medium sheet mill with two three-high stands are reported. From the observations of power consumption and the reductions achieved in the various processes an improved system has been devised.

Metal

Library Metallurgical Inst.

SOV/137-59-3-6874

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 3, p 279 (USSR)

AUTHOR: Chelyshev, N. A.

TITLE: The Stress Distribution and Propagation of Plastic Deformation in Bodies Subjected to Upset Impact and Rolling (Raspredeleniye napryazheniy i rasprostraneniye plasticheskoy deformatsii v telakh pri osadke i prokatke)

PERIODICAL: Dokl. 7-y Nauchn. konferentsii, posvyashch. 40-letiyu Velikoy Oktyabr'sk. sots. revolyutsii. Nr 2. Tomsk. Tomskiy un-t, 1957, pp 64-65

ABSTRACT: Ref. RZhMet, 1958, Nr 9, abstract 19030

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CHELYSHEV, N.A.

GOLUBEV, T.M.; SOROKO, L.N.; ZAYKOV, M.A.; KAFTANOV, M.P.; CHELYSHEV, N.A.; SAKHAROV, G.A.; ZUYEV, B.P.

Power and electric power indexes for blooming mill rolling. Stal' 17 no.2:141-146 F '57. (MLRA 10:3)

1. Sibirskiy metallurgicheskiy institut i Kuznetskiy metallurgicheskiy kombinat.

(Rolling mills) (Electric driving--Testing)

SOV/137-59-3-6751

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 3, p 260 (USSR)

AUTHOR: Chelyshev, N. A. (Siberian Metallurgical Inst., Stalinsk)

TITLE: Optimal Conditions of the Deformation During Rolling (Optimal'nyye usloviya deformatsii pri prokatke)

PERIODICAL: Tr. Mezhvuz. nauchno-tekhn. konferentsii na temu: "Sovrem. dostizh. prokatn. proiz-va". Leningrad, 1958, pp 109-121

ABSTRACT: Pb specimens consisting of two riveted sections were rolled under laboratory conditions. A coordinate grid was superimposed on one of the sections along the vertical plane of symmetry. The degree of deformation (D) at various points was determined from the variations in the dimensions of the grid squares. Experiments demonstrated that the displacement of metal during rolling (R) is nonuniform along the height and throughout the length of the center of D, and that it is a function of the form factor of the center of D, h_{av}/l and of the angle of bite (AB). Maximum displacements are observed in the cross sections of the metal near the entry and the delivery end of the rolls. These displacements decrease gradually in magnitude as the central portion of the center of D is approached. The

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Optimal Conditions of the Deformation During Rolling

greatest uniformity in the displacement of layers of metal is observed during R when $h_{av}/\ell \simeq 0.5$ and $\alpha < 16^{o}$. As the h_{av}/ℓ is further reduced (below 0.3) and the AB is increased ($\alpha > 10^{o}$), maximum displacement throughout the entire length of the center of D occurs in the topmost surface layers (SL), while a sharp displacement of the points in depth is observed only in the vicinity of the exit plane. The D of metal in a blooming mill and in a medium-plate slabbing mill was investigated with the aid of a radioactive tracer introduced into a tapered (wider on top) 7-ton ingot of killed grade 3 steel. The SL's which had time to crystallize before the introduction of the tracer remained inactive. However, the central portion of an ingot which at that time was in a liquid state became radioactive owing to the dissemination of the tracer throughout its volume. The different degrees of radioactivity of the various layers made it possible to differentiate among them. The ingots were rolled without turning, the thicker end entering the rolls first. Each slab was rolled in accordance with its own schedule. Templets which had been shaved down to a thickness of 10 mm were employed in contact autoradiography for determining the variations in dimensions and the configuration of the radioactive and the inactive layers. During rolling in a blooming mill with high form-factor values, the D of the SL's is considerably greater than that of the depth layers. Under these conditions the spread occurs as a result of intensive widening of the central portion of the ingot, while the side layers are being contracted. In

the case of a slab which had been rolled in a medium-slabbing mill with rolls of different diameters (a small idler roll being employed on top), the SL's were deformed to a greater degree than the central layers; compared with the deformation on the side of the smaller roll, the D on the side of the larger roll was greater.

Ya. G.

SOV/137-58-9-18967

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 116 (USSR)

AUTHORS: Golubev, T.M., Chelyshev, N.A., Zaykov, M.A., Kaftanov, M.P., Shamets, Ya.V.

TITLE: An Investigation of the Functioning of a Breakdown Mill (Issledovaniye rezhima raboty obzhimnogo stana)

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Chernaya metallurgiya, 1958, Nr 2, pp 99-112

ABSTRACT: Steady-state conditions in the rolling (R) of blooms and slabs of rail, killed, and certain quality steels are studied at the blooming mill of the Kuznetsk Metallurgical Kombinat. The readings of the mill dial were recorded for subsequent determination of the actual reduction per pass. Simultaneously, the R conditions of each ingot were determined; namely, the number of passes in each groove and the number and sequence of turnings. The functioning of the main motor of the mill was recorded by a MPO-2 8-loop oscillograph. The roll-separating pressure was measured by means of electrical inductive capsules inserted beneath the lower bearings of the mill and precalibrated on an 800-t hydraulic press. The capsule readings

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SOV/137-58-9-18967

An Investigation of the Functioning of a Breakdown Mill

were recorded by the oscillograph. The R temperature of the ingots was measured by optical pyrometer. The investigation determined that the reductions in use caused the roll-separating pressure to be distributed unevenly, namely, that it was greater on the roll bodies than in the passes and that the loading of the mill was uneven from pass to pass. Specific recommendations are made with regard to changes in the R procedure to eliminate inequalities in mill loading. The motor overheats during the period required to R a single ingot, hence, better air cooling is required. The machinery is in operation from 20 to 53% of the overall ingot R time. Increasing output requires a reduction in idling operation between passes. It is wrong to increase R velocity above the rating, since an insignificant increase in R speed causes a substantial rise in motor heating. The load on the motor in R blooms of killed steel is significantly less than with rail steel, and it is consequently possible to increase draft in R killed steel.

S.G.

1. Rolling mills--Performance 2. Steel--Production 3. Rolling mills--Testing equipment 4 Rolling mills--Test results

Card 2/2 Association : Sibirskiy metallurgicheskiy institut

SOV/137-58-9-19030

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 127 (USSR)

AUTHOR: Chelyshev, N.A.

TITLE: Distribution of Plastic Deformation in Cylindrical Bodies Upon Upsetting (Rasprostraneniye plasticheskoy deformatsii v tsilindricheskikh telakh pri osadke)

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Chernaya metallurgiya, 1958, Nr 2, pp 122-132

ABSTRACT: Theoretical and experimental investigation of the distribution of plastic deformation (D) in cylindrical bodies in the vicinity of the yield point due to upsetting leads to the following conclusions. Elastically stressed regions are always present either at the point of contact or in the depth of the body. The maximum uniformity of D is observed when bodies are upset under conditions of h/d ~ 0.5. Friction is not the fundamental cause of the formation of zones of difficult D in upsetting, although a variation in the external coefficient of friction would be manifested in changes in these zones. These zones come into being as the result of a unique distribution of stresses within the body. Analysis of the deformation was made on the basis of previously

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SOV/137-58-9-19030

Distribution of Plastic Deformation in Cylindrical Bodies Upon Upsetting

theoretically established peculiarities in the distribution of stresses through the volume of bodies undergoing upsetting.

Ye.L.

1. Bodies of revolution--Deformation 2. Bodies of revolution--Stresses
3. Stress analysis

Association — Sibirskiy metallurgicheskiy institut

Card 2/2

CHELYSHEV, N.A., kand.tekhn.nauk, dotsent

Achievements in rolling mill practice. Izv.vys.ucheb.zav.: chern.met. no.6:165-169 Je '58. (MIRA 12:8)

1. Sibirskiy metallurgicheskiy institut.
(Rolling (Metalwork))

25(1)

SOV/148-[illegible]

AUTHOR: Chelyshev, N.A., Candidate of Technical Sciences, Docent

TITLE: Peculiarities of Metal Deformation in Sheet Rolling on a Lauth Three-High Mill (Osobennosti deformatsii metalla pri prokatke listov na stane trio Lauta)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, 1959, Nr 2, pp 74-82 (USSR)

ABSTRACT: Peculiarities of sheet deformation on mills with rollers of unequal diameters are investigated. For this purpose experiments were carried out on a Lauth three-high rolling mill. Metal flow during the rolling process was analyzed with the use of Fe^{59} radioactive iron isotopes, so that longitudinal and transverse deformations along the side and in the cross section of the rolled sheet were determined. The experiments were performed together with Engineers R. A. Braunshteyn and A. M. Yampol'skiy. It was stated that the rolling process depended on various factors, such as: the correlation of the roller diameters, the thickness of the rolled sheet, and the friction between the rollers. These factors have also an effect on the correlation of roller compressions, the bend

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